CAI-2007-04

UNITED STATES
DEPARTMENT OF LABOR
MINE SAFETY AND HEALTH ADMINISTRATION

COAL MINE SAFETY AND HEALTH

REPORT OF INVESTIGATION

Surface Coal Mine

Fatal Machinery Accident
March 12, 2007

Double E Augering Inc.
No. 3
Feds Creek, Pike County, Kentucky
I.D. No. 15-18940

Accident Investigators

Robert H. Bellamy
Mining Engineer

Bennett Hylton
Coal Mine Inspector

Originating Office
Mine Safety and Health Administration
District 6
100 Fae Ramsey Lane
Pikeville, KY 41501
Norman G. Page, District Manager

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Photo of Accident Scene

OVERVIEW

At approximately 4:00 p.m. on March 12, 2007, Charles I. Griffith, a 47-year old foreman/excavator operator with 29 years mining experience, 16 months at this mine, received fatal injuries when the John Deere 330C LC track-mounted excavator which he had been operating overturned from an elevated mine bench. Griffith had been loading and moving shot rock overburden while positioned on the narrow bench, digging toward the excavator. The excavator was positioned with the left (operator's) side track on the edge of the upper bench, when Griffith began trying to reposition the machine away from the edge by using the boom. When down pressure was applied to the boom, the rear portion of the track went over the edge of the bench and the excavator began to roll over onto the lower bench. As the excavator continued rolling over, the cab was crushed and the victim was fatally injured.

The accident occurred because the width of the elevated mine bench was not sufficient to insure safe operation of the excavator.

GENERAL INFORMATION

Double E Augering Inc. is a single-seam surface coal mine located approximately 1.5 miles from KY Rt. 366, near Feds Creek in Pike County, Kentucky. The principal officer is Brian Edmonds, President. The mine has one active pit that is mined by removing a contour cut along the outcrop. The mine operates one ten-hour shift, five days per week and employs 5 persons. The mine produces approximately 200 tons of coal per day. The coal is transported from the mine by truck. The last regular safety and health inspection of the mine prior to the accident was completed on March 9, 2007. The injury incidence rate at this mine for the previous quarter was 0.0 compared to a national average of 4.82.

DESCRIPTION OF ACCIDENT

On Monday, March 12, 2007, the shift began at 7:00 a.m. Charles Griffith and Roger Thornsbury, truck driver/dozer operator, began working in the Lower Elkhorn strip pit in order to remove shot rock overburden spoil to expose the coal seam. Griffith operated a John Deere 330C LC excavator and Thornsbury operated a John Deere articulated haul truck to dump spoil in the fill area. After hauling several loads, Thornsbury used the dozer to push the dumped loads over the outslope of the fill in order to make room for additional dumping.

Mark Altizer, the mine permittee (not an employee of the mine), arrived at the mine around 1:00 p.m. and walked from the auger to the pit to observe the coal seam being exposed. There was concern that the poor quality of the coal in this area would necessitate a change in the mining plan and Altizer was present in order to confer with Griffith. At that time, Griffith was operating the excavator on the coal seam level and loading the truck. Thornsbury was in the truck. Altizer then left the pit and went back to the auger to get the mine map.

Brian Edmonds, president/auger operator/mine emergency technician (MET); Timothy Layne, auger helper; and Timothy Dotson, auger helper were working at the auger. The auger was situated approximately 600 feet away and out of sight of the strip pit where Griffith and Thornsbury were working.

Around 3:00 p.m., Altizer walked back to the pit and talked to Griffith. Griffith then constructed a ramp leading from the end of the pit to an elevated bench. He positioned the excavator on the bench, facing the pit, and began digging out spoil above the coal seam and moving it over to the outside of the pit where Thornsbury had been positioning the truck for loading. Thornsbury was on the dozer at that time and Altizer was standing in the pit observing Griffith uncover the coal seam.

Altizer stated he observed that Griffith was operating the excavator with the left track on the edge of the bench and the right track was spinning. Griffith apparently realized the need to reposition the excavator and swung the boom to the right, onto the slope above the bench. He then swung the boom back to the left and placed the bucket on the ground below the bench at an approximate 45-degree angle and applied down pressure, presumably to slide the tracks towards the center of the bench. At that point, the excavator began to slowly roll to the left, over the outslope of the bench. Thornsbury, who was pushing spoil with the dozer, swung the dozer around at about that time and also observed along with Altizer, that the excavator rolled over onto its side and then onto its top.

Altizer and Thornsbury ran to the overturned excavator to assist Griffith. Griffith was located in the cab, which had partially collapsed. They were unable to remove Griffith from the cab. Altizer ran to the auger to get assistance from the other miners while Thornsbury remained at the accident site with Griffith. Edmonds, Layne, and Dotson ran to the accident site while Altizer gathered medical supplies and tools before driving his pickup back to the site. Thornsbury stated that Griffith's pulse stopped within minutes after the accident and Edmonds, who is a MET, could detect no pulse upon arrival. Griffith was pronounced dead at 6:10 p.m. by Russell Roberts, Pike County Coroner.

INVESTIGATION OF ACCIDENT

Brian Edmonds notified MSHA of the accident at 4:09 p.m. on March 12, 2007. A 103(k) Order was issued to secure the accident scene while the investigation was conducted and to ensure the safety of any person working at the mine. An investigation was conducted in cooperation with State officials. Interviews were conducted with four miners and management officials deemed to have knowledge of the facts regarding the accident. The interviews were conducted at the Kentucky Office of Mine Safety and Licensing office at Pikeville, Kentucky on March 13, 2007.

DISCUSSION

MINE CONDITIONS

At the time of the accident, the pit was in an area where the coal seam was of poor quality. In order to determine the best method to proceed with mining, Griffith was in the process of removing the shot rock overburden along the outer edge of the previous pit. Altizer was at the pit to be involved in the decision-making process with Griffith. The overburden had been previously drilled and blasted for a distance of approximately 300 feet along the outcrop in advance of the pit. Rather than remove the overburden the full distance back into the hillside, only the outer portion was being excavated by Griffith in order to more quickly expose the coal.

Prior to the accident two mine benches had been developed along the outcrop in advance of the pit. The upper bench had been established in the previously blasted overburden (spoil) and used as access to the auger. The bench was 13 feet wide at the accident location. The lower bench had been dozed into the in-place shot rock to provide a diversion ditch during the previous shift in order to comply with the reclamation permit. The lower bench was approximately eight feet in elevation below the upper bench and was 12 feet wide.

MACHINE INFORMATION

The machine involved in the accident was a 2005 John Deere 330C LC diesel powered excavator, Serial Number FF330CX083226. The excavator was powered by a John Deere 6081H engine. The operating weight of the excavator was 72,800 pounds. The distance between the outside edges of the tracks was 11 feet, 2 inches. The layout of the excavator was such that the rear of the deck would extend 5 feet, 3 inches past the outside edge of the track with the deck rotated perpendicular to the tracks. A distance of 16 feet, 5 inches would be required for full rotation clearance.

The excavator was not equipped with a ROPS/FOPS (rollover protective structure/falling object protective structure) cab. Under current regulations at 30 CFR 77.403-1, ROPS is not required for this type of equipment. At the time of the accident the manufacturer did not provide ROPS as an option.

ROOT CAUSE ANALYSIS

An analysis was conducted to determine the most basic causes of the accident. Listed below is the root cause identified during the analysis and the corresponding corrective action implemented to prevent a recurrence of the accident.

Root Cause: The standards, policies and procedures used by the mine operator did not ensure that safe working conditions were provided for the employees at all times. The width of the elevated mine bench was not sufficient to provide safe working conditions for the equipment being used and the operation being performed.

Corrective actions: The mine operator developed a plan to prevent a similar occurrence of this accident. The ground control plan was revised to show when track-mounted equipment is being operated parallel to the outslope from an elevated bench on in-place shot material, the width of the bench will be a minimum of 1.5 times wider than the distance between the outside edges of the equipment tracks. The plan also requires training to be provided to the employees concerning the revised ground control plan and hazards associated with operating equipment from a mine bench.

CONCLUSION

The accident occurred because safe conditions for operating the excavator on an elevated mine bench were not provided. The width of the bench was not sufficient to insure safe operation of the excavator. The upper mine bench was measured to be 13 feet wide and the excavator tracks were 11 feet, 2 inches wide. The excavator was being operated on the edge of the bench in order to allow rotation of the deck.

Approved by:

_____ _____

Norman G. Page Date
District Manager

ENFORCEMENT ACTIONS

1. A 103(k) Order No. 7438056 was issued on March 12, 2007, to Double E Augering Inc.

   Condition or Practice: "A fatal accident has occurred at this surface mine causing the death of one person while operating John Deere Excavator No. 1. This order is issued to assure safety of any persons at this mine until an examination and/or investigation is made to determine it is safe. Only these persons selected from company officials, state officials, the miner's representative, and any other persons who are deemed by MSHA to have information relevant to the investigation may remain at the mine."

2. A 104(a) Citation No. 7426856 was issued to Double E Augering Inc. for a violation of 77.1003.

   Condition or Practice: "The width of the mine bench was not sufficient to insure safe operation of the John Deere 330C LC excavator.

   The mine bench was measured to be 13 feet wide and the excavator tracks are 11 feet, 2 inches wide. The excavator was being operated on the edge of the bench in order to allow rotation of the deck.

   On March 12, 2007, a foreman/excavator operator received fatal injuries as a result of the John Deere 330C LC excavator overturning from the elevated mine bench."

List of Persons Participating in the Investigation

Double E Augering Inc.

Brian Edmonds	President
Roger Thornsbury	Truck driver/dozer operator
Timothy Creed Layne	Auger helper
Timothy Dotson	Auger helper
David Baird	Attorney

Highwall Mining Company of Virginia/Kentucky, Inc.

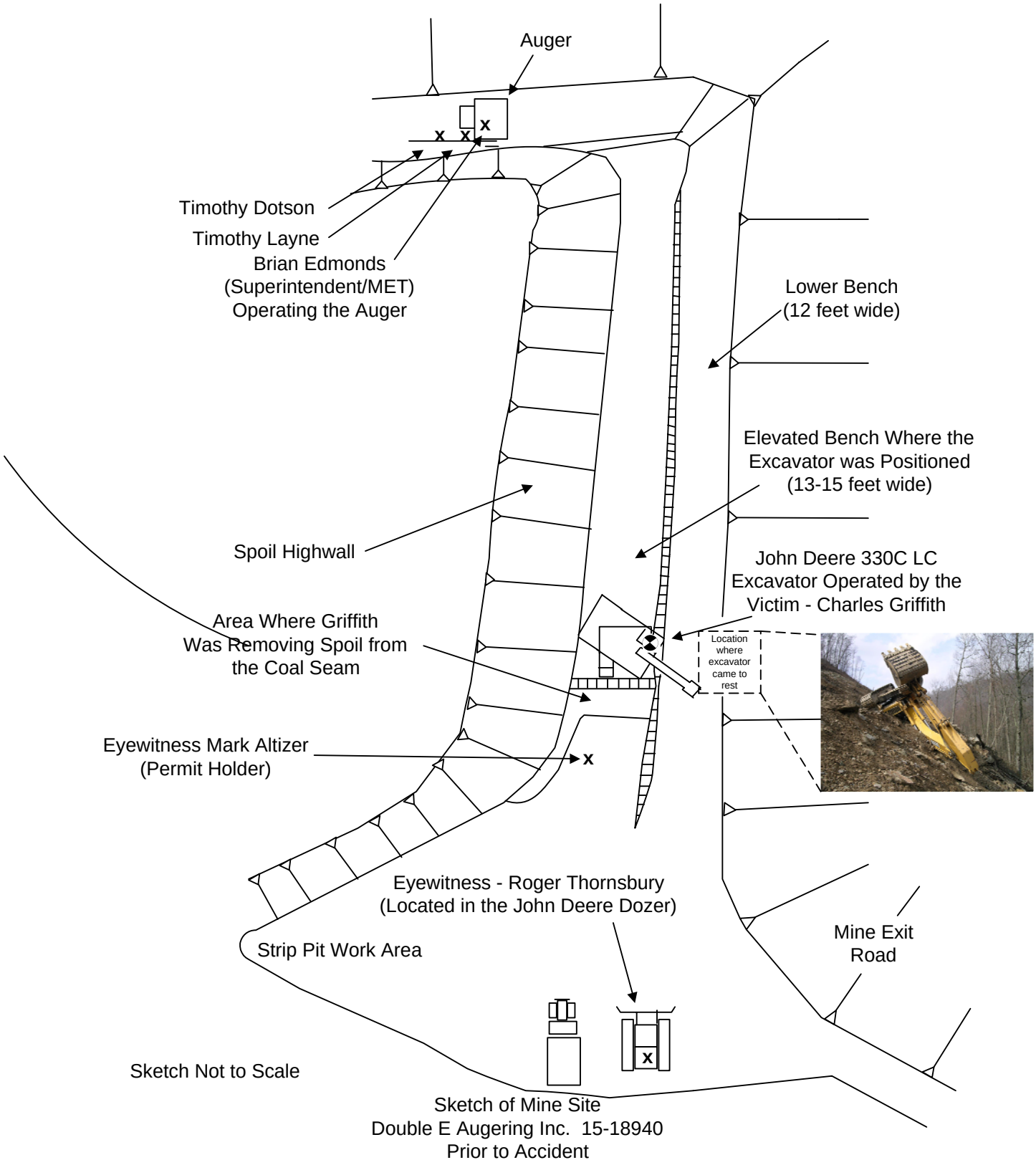
Mark G. Altizer	President

Kentucky Office of Mine Safety and Licensing

Greg Goins	Accident Investigator
Tracy Stumbo	Chief Accident Investigator
Ronald Hughes	Director of Accident Investigations
Brad Fuller	Inspector
Worley Taylor	Inspector
Mike Elswick	District Supervisor

Mine Safety and Health Administration

Bennett Hylton	Coal Mine Inspector
Benny Freeman	Supervisory Mine Inspector
James Hager	Supervisory Mine Inspector
Stevie Justice	Acting Assistant District Manager-Technical
Timothy Watkins	Assistant District Manager-Enforcement
Robert Bellamy	Mining Engineer
Robert Newberry	Mining Engineer
Neil Morholt	Attorney



Sketch of Mine Site
Double E Augering Inc. 15-18940
Prior to Accident

Photo showing upper and lower benches

Photo showing extent of damage to cab of excavator

Accident Investigation Data - Victim Information

Event Number: 4 1 7 7 3 9 2

U.S. Department of Labor
Mine Safety and Health Administration

Victim Information: 1

1. Name of Injured/Ill Employee:	2. Sex	3. Victim's Age	4. Last Four Digits of SSN:	5. Degree of Injury:
Charles I. Griffith	*M*	*47*		*01 Fatal*

6. Date(MM/DD/YY) and Time(24 Hr.) Of Death:	7. Date and Time Started:
a. Date: 03/12/2007 b.Time: 18:10	*a. Date: 03/12/2007 b.Time: 7:00*

8. Regular Job Title:	9. Work Activity when Injured:	10. Was this work activity part of regular job?
049 Supervisory/management/foreman/boss	*065 operate excavator*	Yes X No

11. Experience	Years	Weeks	Days		Years	Weeks	Days		Years	Weeks	Days		Years	Weeks	Days
a. This Work Activity:	*29*	*0*	*0*	b. Regular Job Title:	*1*	*16*	*0*	c: This Mine:	*1*	*16*	*0*	d. Total Mining:	*29*	*0*	*0*

12. What Directly Inflicted Injury or Illness?	13. Nature of Injury or Illness:
076 surface mining machine	*170 crushing*

14. Training Deficiencies:

Hazard: | New/Newly-Employed Experienced Miner: | Annual: | Task:

15. Company of Employment:(If different from production operator)

Operator

Independent Contractor ID: (if applicable)

16. On-site Emergency Medical Treatment:

Not Applicable: | First-Aid: | CPR: | EMT: X | Medical Professional: | None:

17. Part 50 Document Control Number: (form 7000-1)

18. Union Affiliation of Victim: *9999* *None (No Union Affiliation)*